

Notice of Allowability

Application No.

10/550,302

Examiner

BETTY FORMAN

Applicant(s)

OHNISHI ET AL.

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *papers of 22 March 2011 & Interview of 15 April 2011.*
2. ☒ The allowed claim(s) is/are *1,3,4,8-13,16 and 17.*
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u><i>4/11</i></u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

/BJ Forman/
Primary Examiner, Art Unit 1634

NOTICE OF ALLOWABILITY

Status of the Claims

This action is in response to papers filed 22 March 2011 in which claims 1, 8 and 12 were amended and claim 18 was canceled.

This action is further in response to amendments discussed and agreed upon during an interview between the examiner and Mr. Loffredo on April 15, 2011.

The amendments place the pending claims in condition for allowance.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Justin Loffredo on 15 April 2011.

The application has been amended as follows:

Replace Claim 1 with the following:

A microchip for extracting nucleic acids, the microchip comprising:

a first substrate; and

a second substrate connected with the first substrate to define a connecting surface therebetween, the first substrate and the second substrate defining a microchannel in the connecting surface by a first groove part of the first substrate and a

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second groove part of the second substrate, the first groove part having a first protruding part and the second groove part having a second protruding part,

wherein one of the first and second substrates includes a first inlet and a second inlet connected to the microchannel, the first inlet having received therein a first liquid containing microbeads, the second inlet having received therein a second liquid containing nucleic acid,

wherein the microchannel includes a gap part formed by the first protruding part and the second protruding part, the gap part having a sectional size variable by a movable protruding part in the first groove part or in the second groove part, the movable protruding part being the first protruding part or the second protruding part, wherein, when the microchip is in use, the gap part is configured to block microbeads of a size greater than the sectional size of the gap part, and

wherein the microchannel has an inner wall surface treated with triethylchlorosilane.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art does not reasonably teach or make obvious the instantly claimed combination of surface-treated channel comprising projections forming a movable and size-variable gap and two inlets independently having beads and nucleic acids.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Claims 1, 3-4, 8-13 and 16-17 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BETTY FORMAN whose telephone number is (571)272-0741. The examiner can normally be reached on 6:00 TO 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nguyen can be reached on (571) 272-0731. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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